SHARP SERVICE MANUAL

GF-7A/AR
GF-7Z/ZR

ATSM282016RCS

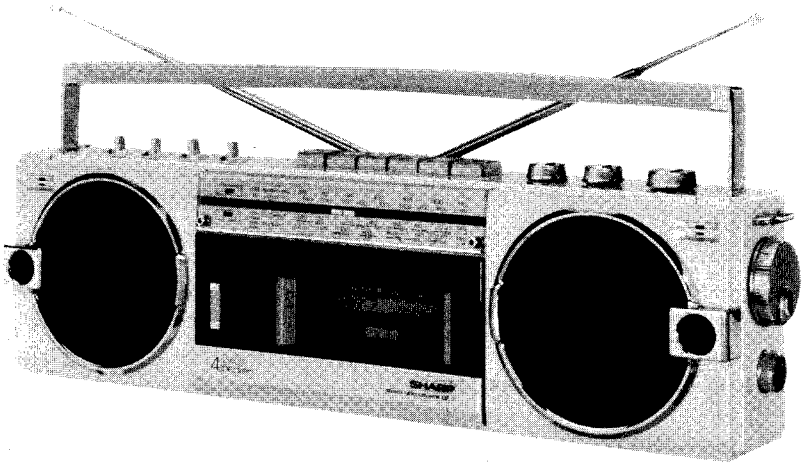


photo: GF-7Z

GF-7A
GF-7AR
GF-7Z
GF-7ZR

Caution!
Under the employment of latest technologies this set uses leadless parts. Consult pages 15 and 16 without fail before replacing them.

In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified be used.

SPECIFICATIONS

GENERAL

Power source:	AC 110 ~ 127V/220 ~ 240V with AC adaptor DC 9V (UM/SUM-2, R14, HP-11 or C-type x 6)
Speakers:	10 cm woofer x 2 Tweeter x 2
Output power:	PMPO; 7W + 7W (AC adaptor) MPO; 5W + 5W (AC adaptor) RMS; 2.9W + 2.9W (DC operation, 10% distortion)
Semiconductors:	6 ICs 7 transistors 15 diodes 7 LEDs
Dimensions:	
Width;	418 mm
Depth;	80 mm
Height;	120 mm
Weight:	2.4 kg without batteries

TAPE RECORDER

Tape:	Compact cassette tape
Frequency response:	30 ~ 13,000 Hz (normal tape) 30 ~ 14,000 Hz (CrO_2 tape) 30 ~ 16,000 Hz (metal tape)
Signal/Noise ratio:	50 dB
Input impedance:	
External mic.;	600 ohms
Line in;	100K ohms
Output impedance:	
Headphones;	32 ohms or greater

RADIO

Frequency range:	AM;	525 kHz ~ 1605 kHz
	SW_1;	2.3 MHz ~ 7.3 MHz
	SW_2;	7.3 MHz ~ 22 MHz
	FM;	87.6 MHz ~ 108 MHz

Specifications for this model are subject to change without prior notice.

SHARP CORPORATION OSAKA, JAPAN

FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

NAMES OF PARTS

1. Telescopic Rod Antenna
2. Record Muting Knob
3. Mode Selector Knob
4. Tape Selector Knob
5. Function Selector Knob
6. Pause Button
7. Fast Forward Button
8. Rewind Button
9. Playback Button
10. Record Button
11. Stop/Eject Button
12. Tone Control Knob
13. Balance Control Knob
14. Volume Control Knob
15. Built-in Microphone (Left Channel)
16. Tape Counter
17. Record/Battery Indicator
18. FM Stereo Indicator
19. Tape Counter Reset Button
20. Built-in Microphone (Right Channel)
21. Tuning Control Knob
22. Tweeter (Left Channel)
23. Woofer (Left Channel)
24. APLD Programme Number Set Button
25. APLD Programme Number Indicators
26. Cassette Compartment
27. Woofer (Right Channel)
28. Tweeter (Right Channel)
29. Fine Tuning Control
30. Band Selector Knob
31. External Microphone Jacks
32. Line Input Jacks
33. Battery Compartment
34. Line Output Jacks
35. Headphones Jacks
36. Beat Cancel Switch
37. External DC Power Supply Jack

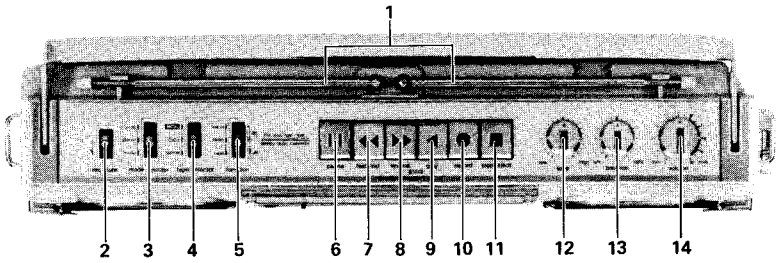


Figure 2–1

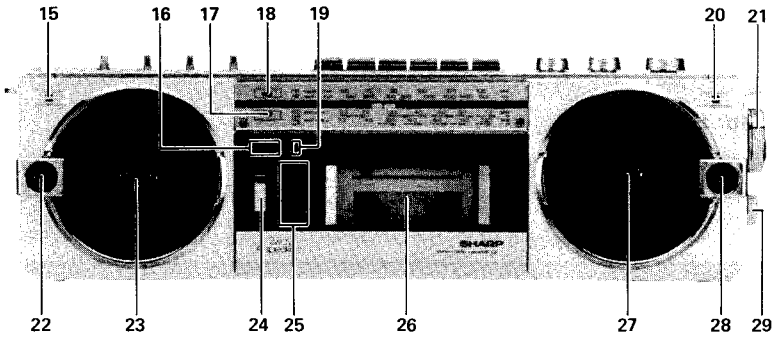


Figure 2–2

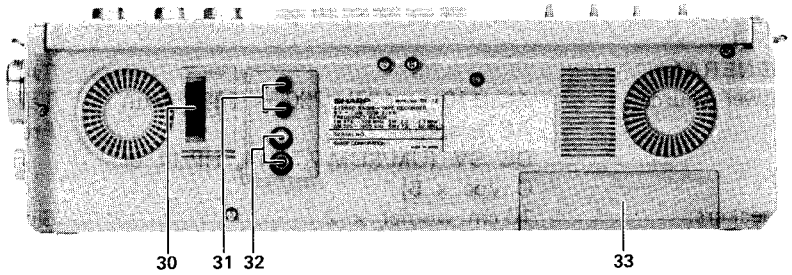


Figure 2–3

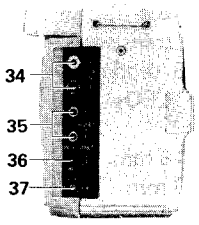


Figure 2–4

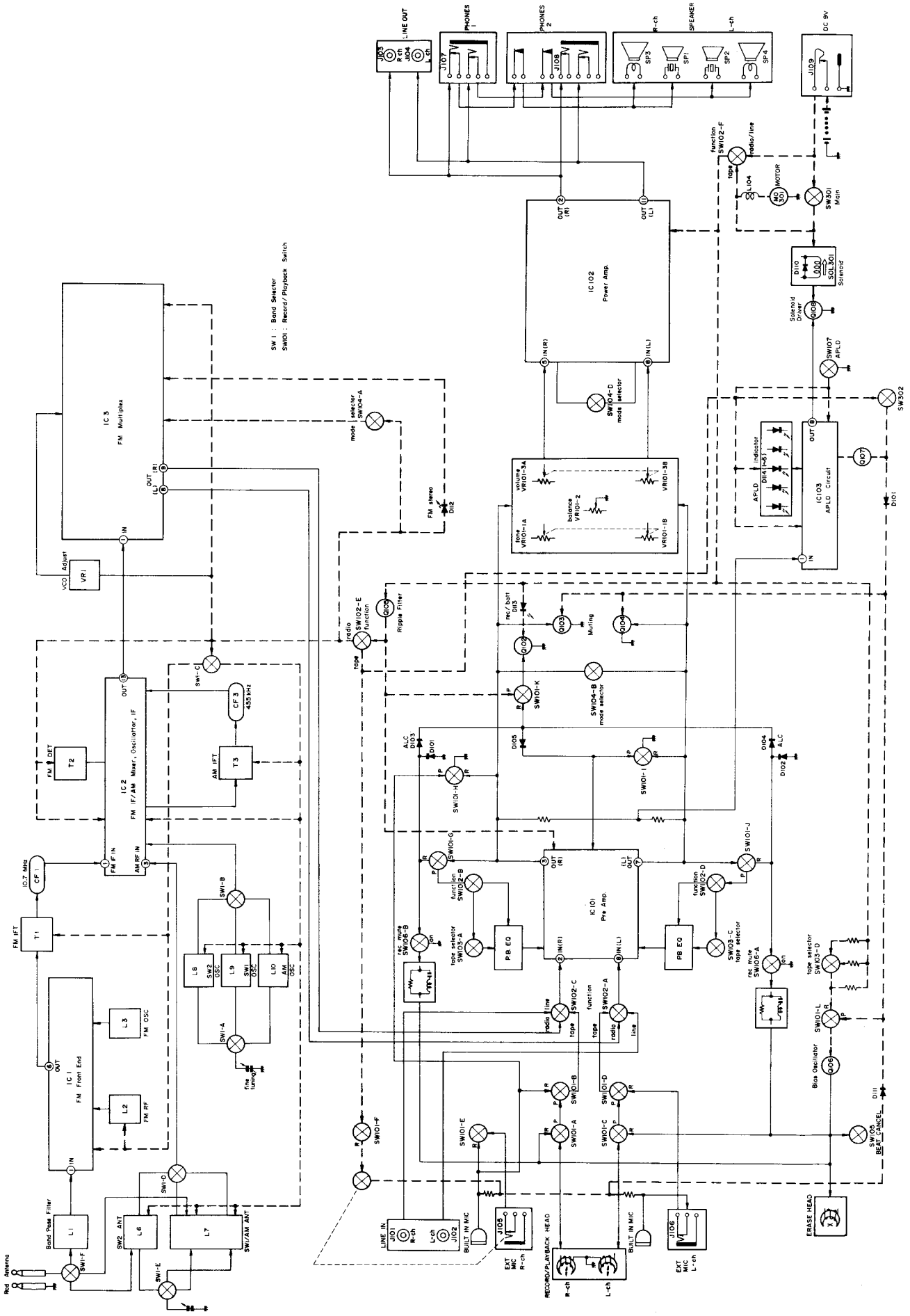


Figure 3 BLOCK DIAGRAM

DISASSEMBLY

Caution:
Prior to the disassembly, be sure to remove the AC adaptor, battery, cassette tape, plug, etc. from the unit.
Set the pointer on the left side.

1. REMOVAL OF FRONT CABINET

1) Pull out five knobs. See Fig. 4–1.
2) Remove five screws at the front cabinet. See Fig. 4–2.
3) Take out the front cabinet while loosening the tabs situated at the bottom of the rear cabinet. See Fig. 4–3.
4) Remove the LED P.W. board (A) at the front cabinet, and disconnect the socket (B) from the amplifier P.W. board. See Fig. 4–4.

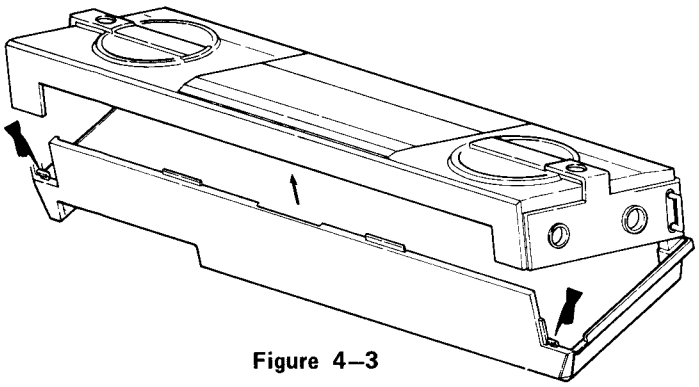


Figure 4–3

2. REMOVAL OF REAR CABINET

1) Make sure that the front cabinet has been removed from the unit.
   Take the tip (C) out of the battery terminal. See Fig. 4–5.
2) Remove three screws (D) at the rear cabinet and take the rear cabinet off. See Fig. 4–5.
3) Disconnect the socket (E) from the radio P.W. board. See Fig. 4–6.
4) For easier servicing, the leads nearby may be removed: after the work, be sure to replace them as they were.

3. REMOVAL OF SWITCHES P.W.B.

1) Make sure that the front cabinet and rear cabinet have been removed from the unit.
2) Remove two screws (F) at the switches P.W. board, and take the switches P.W. board off. See Fig. 4–7.
3) For easier servicing, the leads nearby may be removed: after the work, be sure to replace them where they were.

4. REMOVAL OF DIAL CORD STRINGING FRAME

1) Make sure that the front cabinet and rear cabinet have been removed from the unit.
2) Remove three screws (G, I and N) at the dial cord stringing frame, and take the frame off. See Figs. 4–7 and 5–1.
3) For easier servicing, the leads nearby may be removed: after the work, be sure to replace them where they were.

5. REMOVAL OF CONTROL P.W.B.

1) Make sure that the front cabinet and rear cabinet have been removed from the unit.
2) Remove three screws (G, I and N) at the dial cord stringing frame, and take the frame off. See Figs. 4–7 and 5–1.
3) Remove one screw (H) at the control P.W. board bracket, and take the control P.W. board off. See Fig. 4–7.
4) For easier servicing, the leads nearby may be removed: after the work, be sure to replace them where they were.

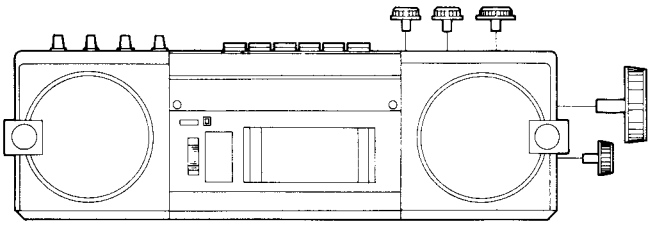


Figure 4–1

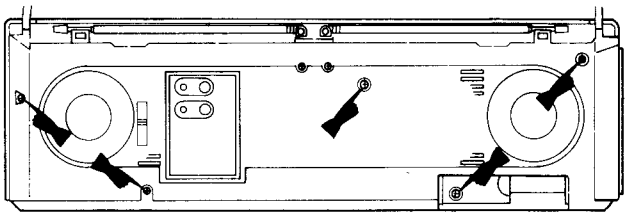


Figure 4–2

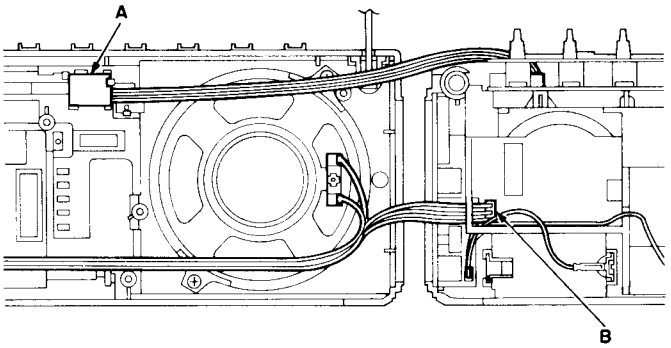


Figure 4–4

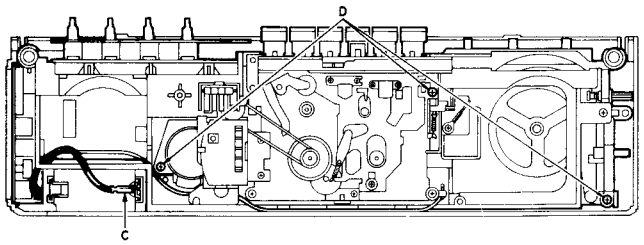


Figure 4–5

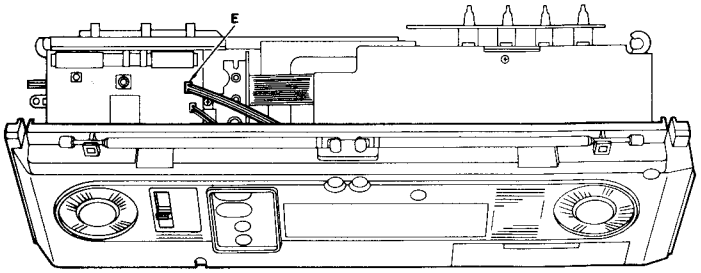


Figure 4–6

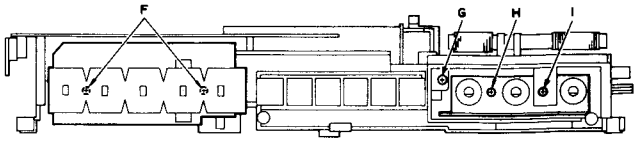


Figure 4–7

6. REMOVAL OF MECHANISM BLOCK

1) Make sure that the front cabinet and rear cabinet have been removed from the unit.
2) Remove the P.W. board holder (K) and tape counter drive belt (L). See Fig. 5–1.
3) Remove three screws (G, I and N) at the dial cord stringing frame, and take the frame off. See Figs. 4–7 and 5–1.
4) Remove two screws (M) at the mechanism block, and take the mechanism block off. See Fig. 5–1.
5) For easier servicing, the leads nearby may be removed: after the work, be sure to replace them where they were.

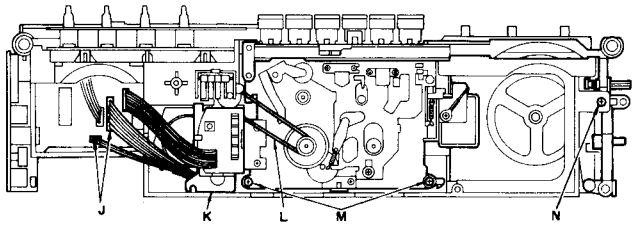


Figure 5–1

7. REMOVAL OF AMP. P.W.B. AND JACKS P.W.B.

1) Make sure that the front cabinet and rear cabinet have been removed from the unit.
2) Disconnect two sockets (J) from the amplifier P.W. board and P.W. board holder (K) at the main frame. See Fig. 5–1.
3) Remove one screw (O) at the jacks P.W. board, and two screws (P) at the amplifier P.W. board, then take out both P.W. boards. See Fig. 5–2.
4) For easier servicing, the leads nearby may be removed: after the work, be sure to replace them where they were.

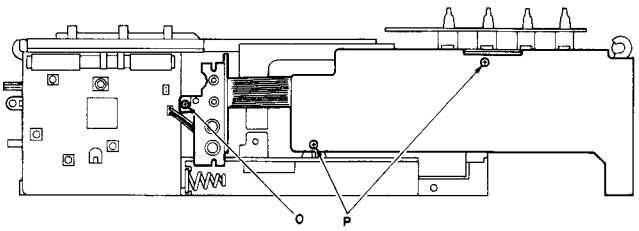


Figure 5–2

DIAL CORD STRINGING

1) Turn the drum fully clockwise and stretch its cord over the parts in the numerical order – as shown in Fig. 5–4.
2) Turn the tuning control shaft fully counterclockwise, and fix it with the pointer aligned with the zero (0) point on the dial scale. See Fig. 5–3.

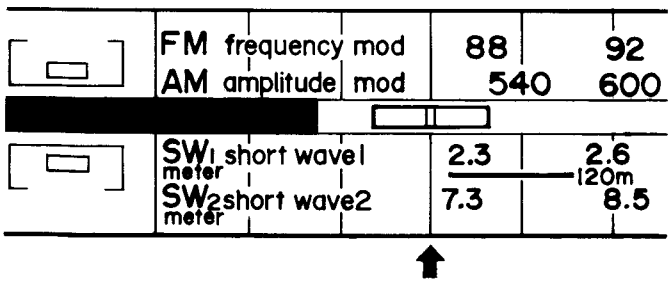
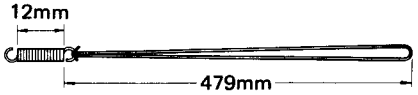


Figure 5–3



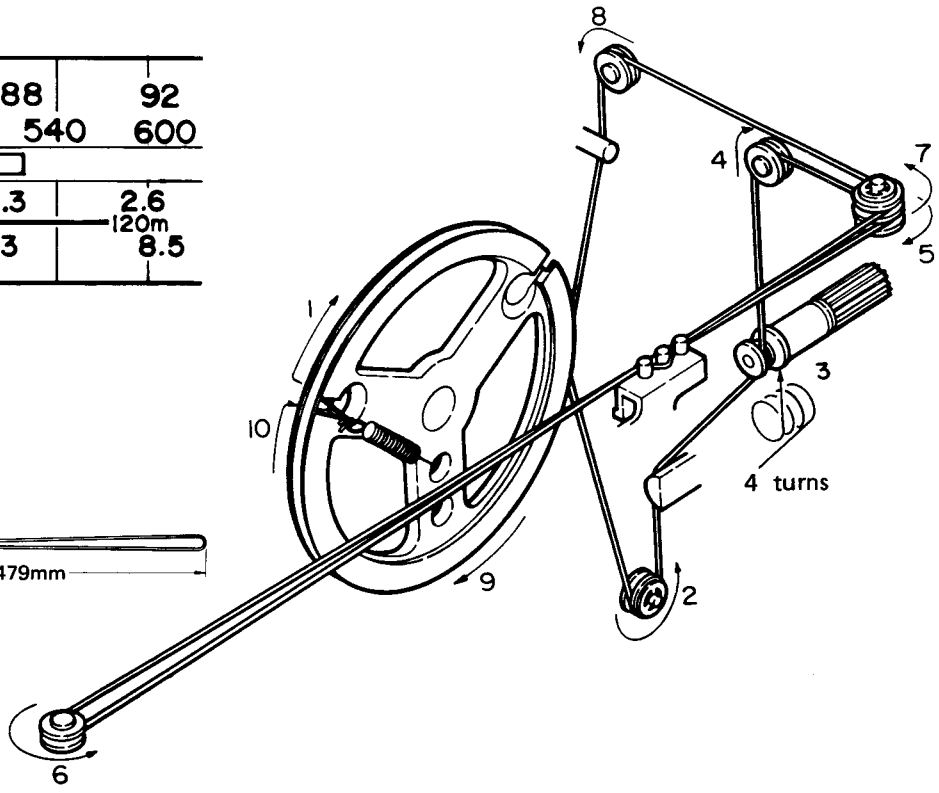


Figure 5–4

MECHANICAL ADJUSTMENT

- **Pinch Roller Pressure Check**

1) Place the unit in play mode.
2) Push the pinch roller, at the point Ⓐ shown in Fig. 6–1, by using a tension gauge (500 gr.) so that it will come off the capstan. Then, slowly release the tension until the pinch roller hits the capstan again (i.e., the pinch roller is about to rotate again). Check, then, the tension gauge is reading 270 gr. to 320 gr.
3) If the reading is outside the range of 270 gr. to 320 gr. bend the pinch roller spring or replace.

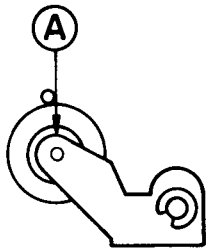


Figure 6–1

- **Torque Check at Play, Fast Forward and Rewind Modes**

Put a torque meter cassette in the cassette compartment of the unit, and see that the measured torque in each mode is normal as follows:

Mode	Torque meter cassette	Measured torque
Playback	TW–2111	35 ~ 60 gram. cm
Fast forward	TW–2231	85 ~ 120 gram. cm
Rewind	TW–2231	85 ~ 120 gram. cm

- **Record/Playback Head Azimuth Adjustment**

1) Make connection of instruments as shown in Fig. 6–2.
2) Set the mode selector switch at "tape" position.
3) Put a test tape (TEAC, MTT-114, 10 kHz 250 pWb/m, −10 dB prerecorded) into the unit and play it.
4) Adjust the head azimuth adjusting screw so that the electronic voltmeter reading is maximal.

Note:
If a dual-trace oscilloscope is available, perform the adjustment so that the reading of the oscilloscope is maximal and with the least phase/output difference between channels. After the work, check that the head azimuth adjusting screw has been secured completely.

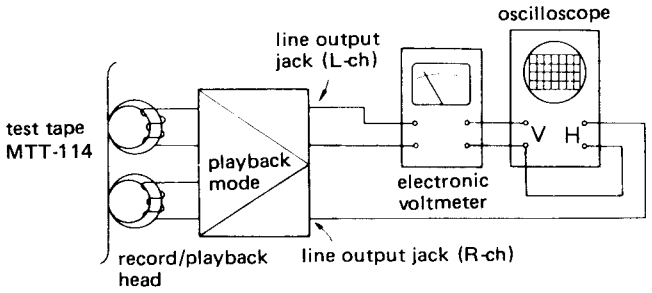


Figure 6–2

- **Tape Speed Adjustment**

1) Connect a wow/flutter meter, across a 100 kohm resistor, to the line output jack.
2) Play a test tape (TEAC, MTT-111, 3 kHz prerecorded).
3) Put a plastic screwdriver into the hole of the motor and adjust the semi-variable resistor so that the output frequency is 2960 ~ 3015 Hz on the wow/flutter meter.

ELECTRICAL ADJUSTMENT

- **Bias Oscillator Frequency Check**

1) Make a connection of instruments as shown in Fig. 6–3.
2) Set the function selector switch at "tape", the tape selector switch at "normal" and the beat cancel switch at "A" postion.
3) Place the unit in record mode, and see that the frequency counter is reading 60 ± 5 kHz.
   Change the beat cancel switch from "A" position to "B" position, then see that the present frequency counter's reading 60 ± 5 kHz is changed by +1.0 kHz ~ +1.5 kHz.

- **Erase Current Check**

1) Make a connection of instruments as shown in Fig. 6–3.
2) Set the tape selector switch at "metal" position.
3) Place the unit in record mode, and see that the electronic voltmeter is reading 30 ± 4V.
   Change the tape selector switch from "metal" position to "normal" position, then see that the electronic voltmeter indicates 16 ± 3V.

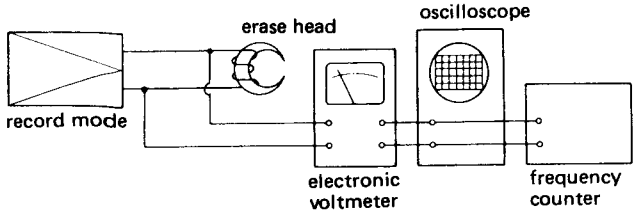


Figure 6–3

- **Playback Amplifier Sensitivity Check**

1) Make a connection of instruments as shown in Fig. 6–4.
2) Set the function selector switch at "tape", the tape selector switch at "normal", the volume control knob at "10 (max)", and the tone control knob at "center" position.
3) Playback a test tape (TEAC MTT-118, 1 kHz, 250 pWb/m, −10 dB prerecorded).
4) See that the electronic voltmeter is reading about 60 mV.
5) Then see that the electronic voltmeter indicates about 1.2V if it is connected to the line output jack.

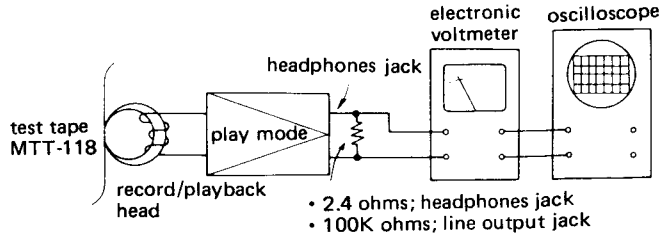


Figure 6–4

GENERAL ALIGNMENT INSTRUCTION

Should it become necessary at any time to check the alignment of this receiver, proceed as follows;

1. Set the volume control (VR101-3) to maximum.
2. Attenuate the signals from the generator enough to swing the most sensitive range of the output meter.
3. Use a non-metallic alignment tool.
4. Repeat adjustments to insure good results.
5. Set the Function Selector Switch (SW102) to "radio" position.

AM IF/RF ALIGNMENT

STEP	BAND	TEST STAGE	SIGNAL GENERATOR		RECEIVER		ADJUSTMENT
			CONNECTION TO RECEIVER	INPUT SIGNAL FREQUENCY	DIAL SETTING	REMARKS	
1	AM	IF	Refer to Figure 8–1.	455 kHz.	High end of dial.	Adjust for best "IF" curve	Adjust the AM/SW IF transformer T3.
2	AM	Band Coverage	Refer to Figure 8–2.	510 kHz. (400 Hz, 30%, AM modulated)	Low end of dial.	Adjust for maximum output.	Adjust the AM oscillation coil L10.
3	AM		Same as step 2.	1650 kHz. (400 Hz, 30%, AM modulated)	High end of dial.	Same as step 2.	Adjust the AM oscillation trimmer TC8.
4	AM	Tracking	Same as step 2.	600 kHz. (400 Hz, 30%, AM modulated)	600 kHz.	Same as step 2.	Adjust the AM bar antenna coil L7. See Note A
5	AM		Same as step 2.	1400 kHz. (400 Hz, 30%, AM modulated)	1400 kHz.	Same as step 2.	Adjust the AM antenna trimmer TC5.
6	AM	Repeat steps 2, 3, 4, and 5 until no further improvement can be made.					
7	SW_1	Band Coverage	Refer to Figure 8–3.	2.25 MHz. (400 Hz, 30%, AM modulated)	Low end of dial.	Same as step 2.	Adjust the SW_1 oscillation coil L9.
8	SW_1		Same as step 7.	7.4 MHz. (400 Hz, 30%, AM modulated)	High end of dial.	Same as step 2.	Adjust the SW_1 oscillation trimmer (TC7).
9	SW_1	Tracking	Same as step 7.	2.6 MHz. (400 Hz, 30%, AM modulated)	2.6 MHz.	Same as step 2.	Adjust the SW_1 bar antenna coil L7. See Note A
10	SW_1		Same as step 7.	6.0 MHz. (400 Hz, 30%, AM modulated)	6.0 MHz.	Same as step 2.	Adjust the SW_1 antenna trimmer (TC4).
11	SW_1	Repeat steps 7, 8, 9 and 10 until no further improvement can be made.					
12	SW_2	Band Coverage	Same as step 7.	7.2 MHz. (400 Hz, 30%, AM modulated)	Low end of dial.	Same as step 2.	Adjust the SW_2 oscillation coil L8.
13	SW_2		Same as step 7.	22.5 MHz. (400 Hz, 30%, AM modulated)	High end of dial.	Same as step 2.	Adjust the SW_2 oscillation trimmer TC6.
14	SW_2	Tracking	Same as step 7.	8.5 MHz. (400 Hz, 30%, AM modulated)	8.5 MHz.	Same as step 2.	Adjust the SW_2 antenna coil L6.
15	SW_2		Same as step 7.	19 MHz. (400 Hz, 30%, AM modulated)	19 MHz.	Same as step 2.	Adjust the SW_2 antenna trimmer TC3.
16	SW_2	Repeat steps 12, 13, 14 and 15 until no further improvement can be made.					

Note A Check the alignment of the receiver antenna coil by bringing a piece of ferrite (such as a coil slug) near the antenna loop stick, then a piece of brass. If ferrite increases output, loop requires more inductance. If brass increases output, loop requires less inductance. Change loop inductance by sliding the bobbin toward the center of ferrite core to increase inductance, or away to decrease inductance.

FM IF/RF ALIGNMENT

STEP	BAND	TEST STAGE	SIGNAL GENERATOR		RECEIVER		ADJUSTMENT
			CONNECTION TO RECEIVER	INPUT SIGNAL FREQUENCY	DIAL SETTING	REMARKS	
1	FM	IF	Refer to Figure 8–4.	10.7 MHz. See Note B	High end of dial.	Adjust for best "S" curve	Adjust the FM IF transformer T1 and FM Detection transformer T2.
2	FM	Band Coverage	Refer to Figures 8–5 and 8–7.	87.1 MHz (400 Hz, 30%, FM modulated)	Low end of dial.	Adjust for maximum output.	Adjust the FM oscillation coil L3.
3			Same as step 2.	109 MHz, (400 Hz, 30%, FM modulated)	High end of dial.	Same as step 2.	Adjust the FM oscillation trimmer TC2.
4	FM	Tracking	Same as step 2.	88 MHz. (400 Hz, 30%, FM modulated)	88 MHz	Same as step 2.	Adjust the FM RF coil L2.
5			Same as step 2.	108 MHz. (400 Hz, 30%, FM modulated)	108 MHz	Same as step 2.	Adjust the FM RF trimmer TC1.
6	FM	Repeat steps 2, 3, 4 and 5 until no further improvement can be made.					

FM STEREO ALIGNMENT

Set the Band Selector Switch (SW1) to "FM" position and Mode Selector Switch (SW104) to "stereo" position. Making this adjustment, connect the anode side of FM Stereo indicator (D112) to GND.

STEP	SIGNAL GENERATOR		RECEIVER		ADJUSTMENT
	CONNECTION TO RECEIVER	INPUT SIGNAL FREQUENCY	DIAL SETTING	REMARKS	
1	Refer to Figures 8–6 and 8–7.	98 MHz (54 dB) un modulated.	98 MHz	Adjust for 38±0.1 kHz	Adjust the semi-variable resistor (VR1)

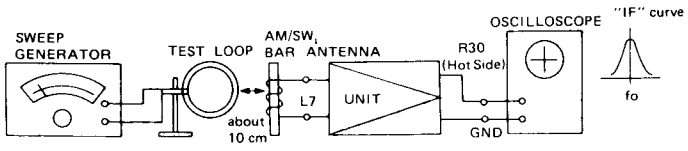


Figure 8–1

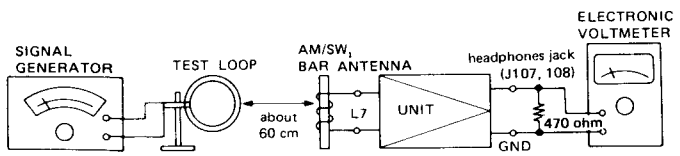


Figure 8–2

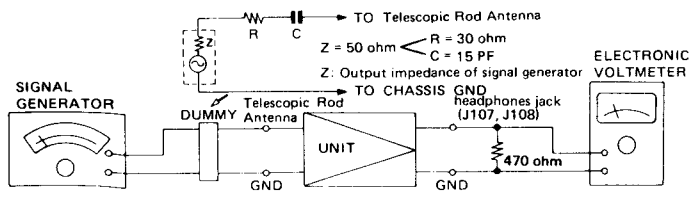


Figure 8–3

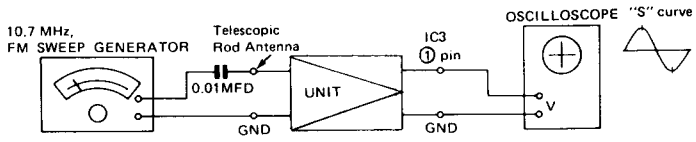


Figure 8–4

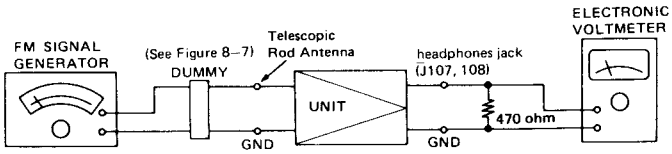


Figure 8–5

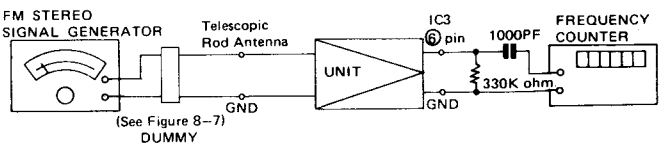


Figure 8–6

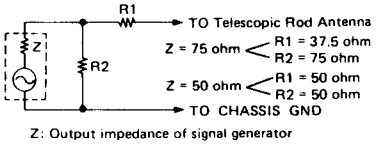
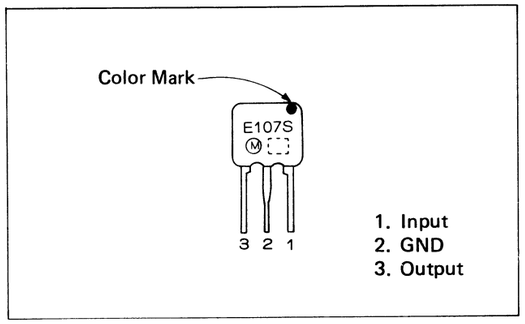


Figure 8–7 FM DUMMY

Note B When other ceramic filters than the one (red) having the central frequency of 10.7 MHz are used, note that a marker (10.7 MHz) of FM sweep generator, if used, will be deviated – therefore, adjust the generator by putting off the marker.

Central frequency (fo)	Black	10.64 MHz ± 30 kHz
	Blue	10.67 MHz ± 30 kHz
	Red	10.70 MHz ± 30 kHz
	Orange	10.73 MHz ± 30 kHz
	White	10.76 MHz ± 30 kHz



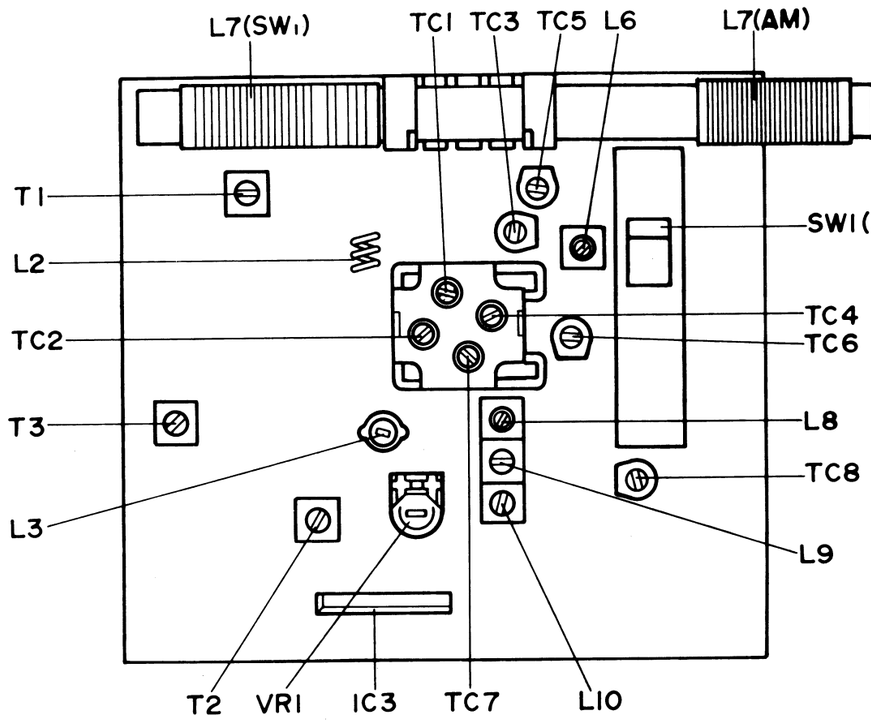
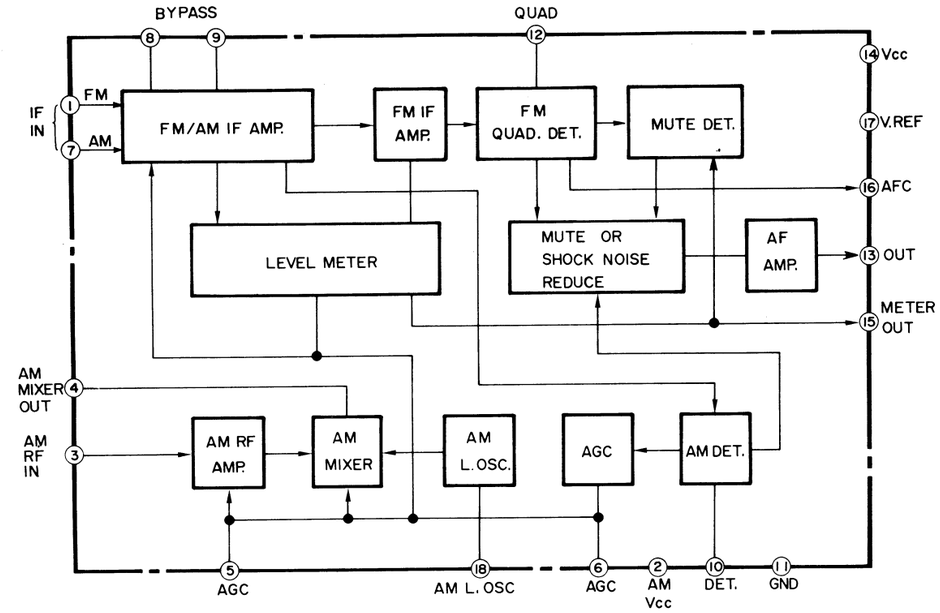


Figure 9 ADJUSTMENT POINTS

VHIAN7223//-1 (IC2)



VHIIR3R20A/-1 (IC103)

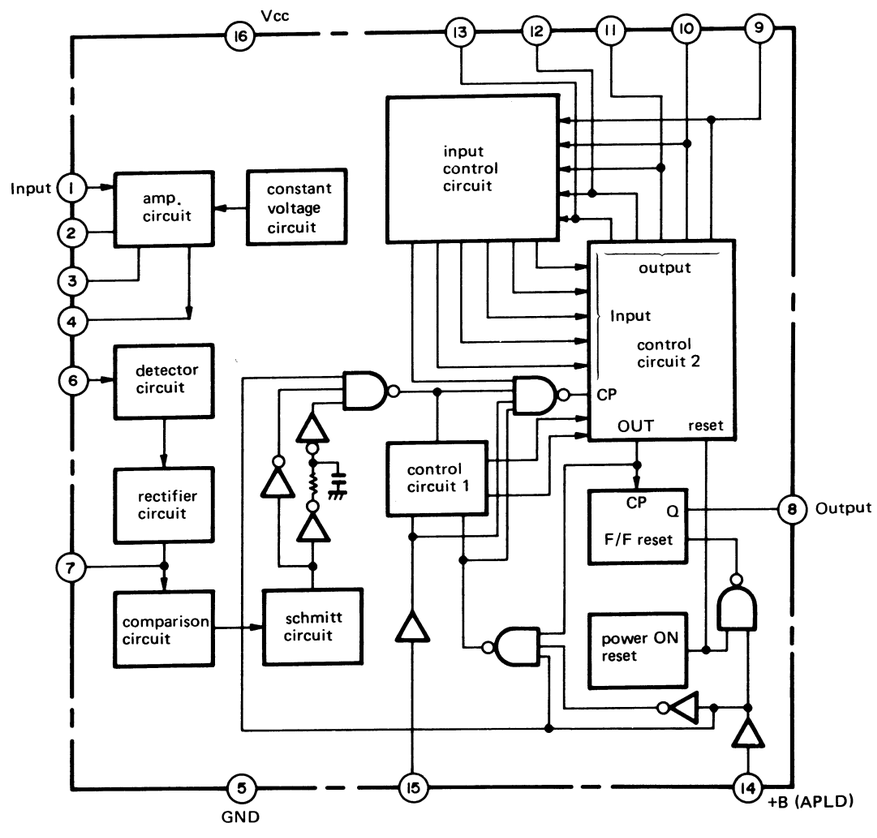
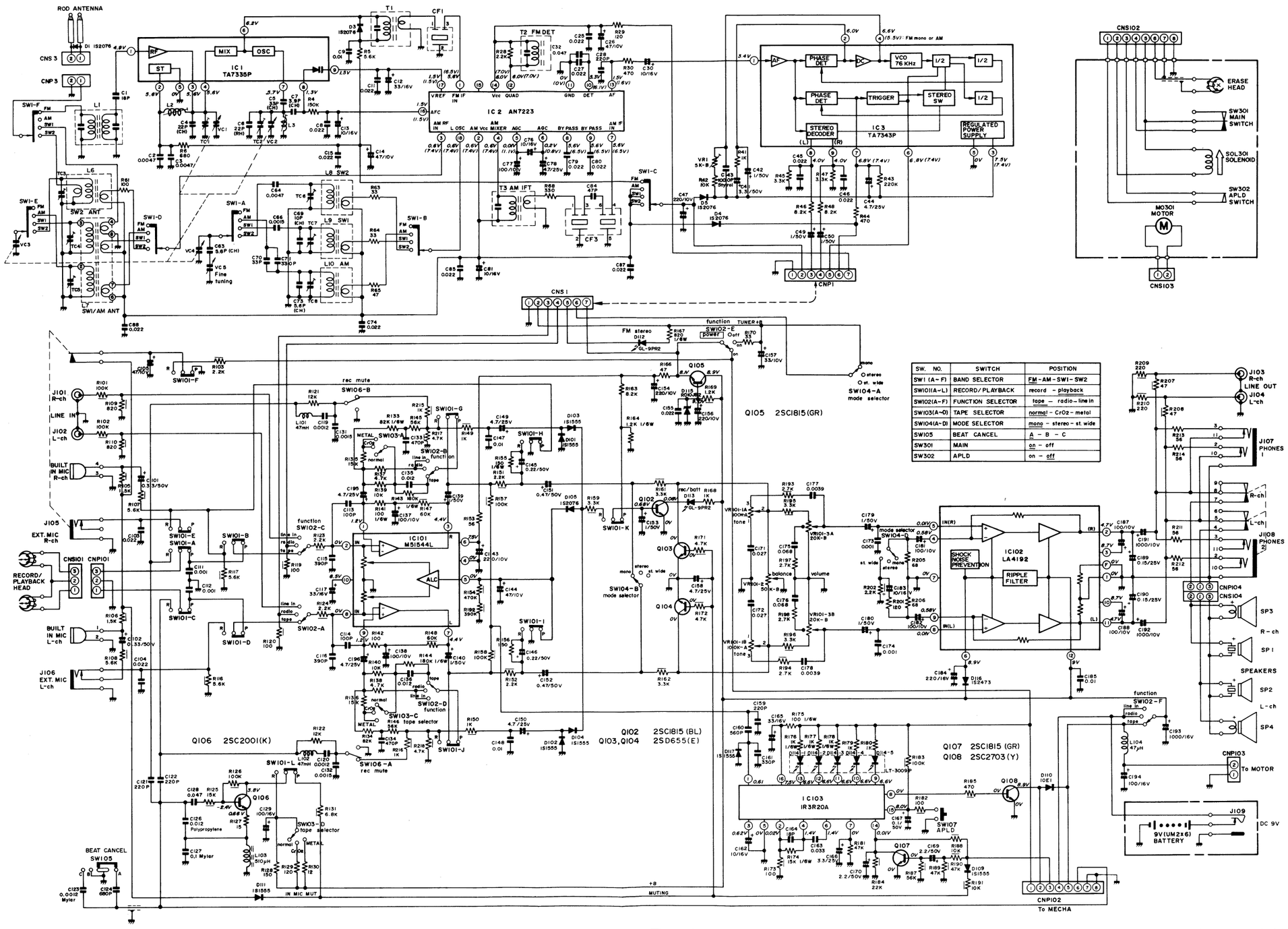


Figure 10 BLOCK DIAGRAMS OF INTEGRATED CIRCUIT



SW. NO.	SWITCH	POSITION
SW1 (A-F)	BAND SELECTOR	FM - AM - SW1 - SW2
SW101(A-L)	RECORD/PLAYBACK	record - playback
SW102(A-F)	FUNCTION SELECTOR	tape - radio - line in
SW103(A-D)	TAPE SELECTOR	normal - CrO2 - metal
SW104(A-D)	MODE SELECTOR	mono - stereo - st. wide
SW105	BEAT CANCEL	A - B - C
SW301	MAIN	on - off
SW302	APLD	on - off

- The voltage in each part is measured by using an electronic voltmeter, with the unit being kept in play mode (with no signal given).
  As for the radio circuit, the voltage indication without parentheses is in FM stereo mode, and that with parentheses is in AM mode.
- Specifications or wiring diagrams of this model are subject to change for improvement without prior notice.

Figure 11 SCHEMATIC DIAGRAM

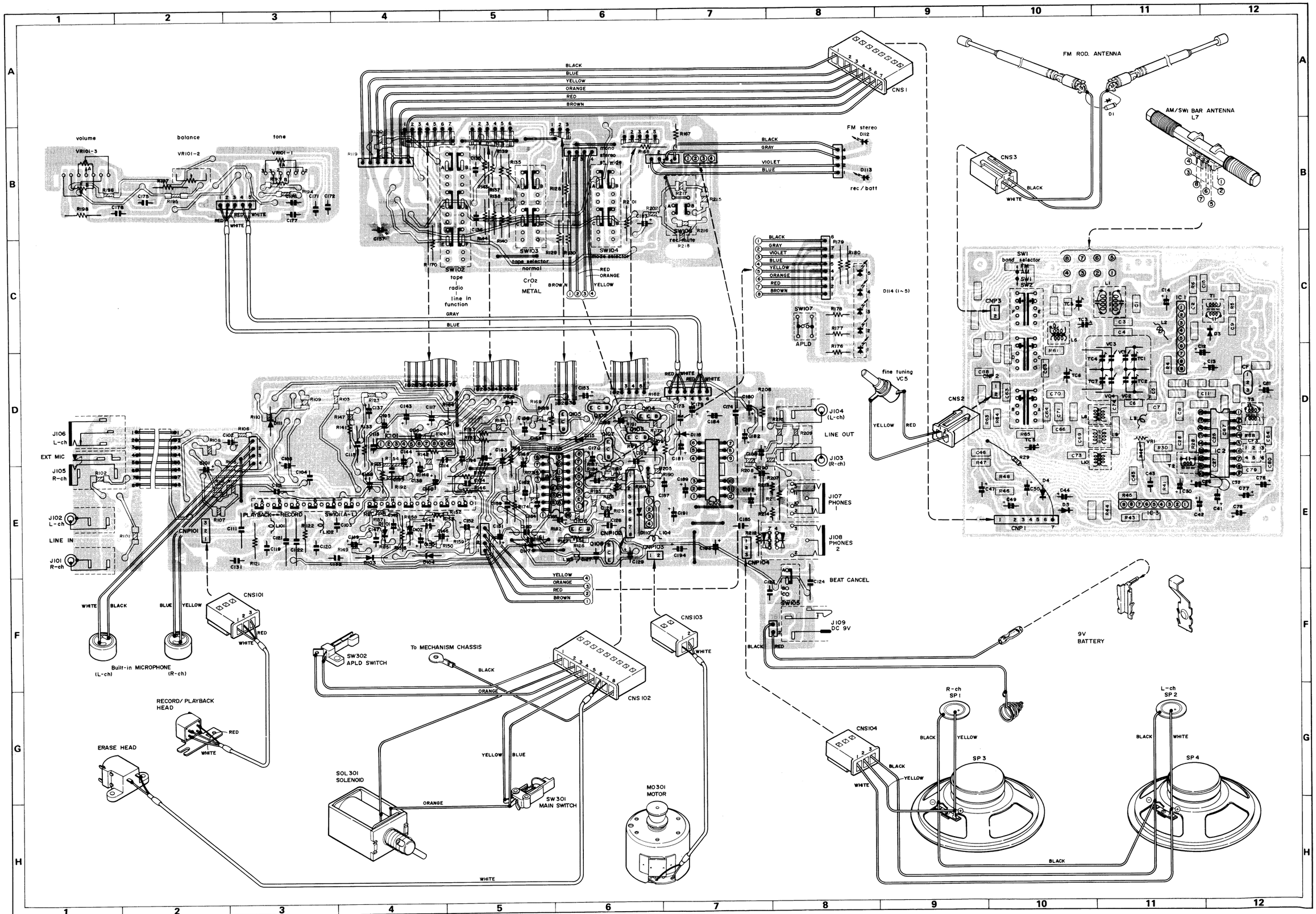


Figure 13 WIRING SIDE OF PRINTED WIRING BOARD

INFORMATION OF LEADLESS TYPE RESISTORS, CAPACITORS & JUMPERS

EXPLANATORY NOTES OF TUBULAR-SHAPED CHIP RESISTORS, TUBULAR-SHAPED CHIP CAPACITORS AND TUBULAR-SHAPED CHIP JUMPERS.

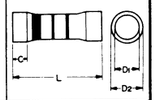
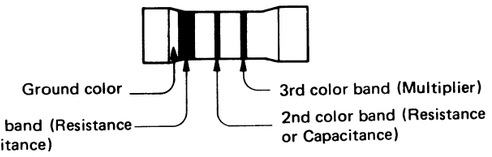
	• Tubular-shaped chip resistor • Tubular-shaped chip capacitor • Tubular-shaped chip jumper
Appearance	
Dimensions	L: 5.9±0.2mm C: 1.0±0.5mm D_1: 2.2±0.1mm D_2: 2.4mm(max)

Table 15–1

IDENTIFICATION OF TUBULAR-SHAPED CHIP RESISTORS, TUBULAR-SHAPED CHIP CAPACITORS AND TUBULAR-SHAPED CHIP JUMPERS.

Appearance of Tubular-Shaped Chip Resistor and/or Tubular-Shaped Chip Capacitor


Ground color
3rd color band (Multiplier)
1st color band (Resistance or Capacitance)
2nd color band (Resistance or Capacitance)

Color band / Color	1st color band	2nd color band	3rd color band
Black	0	0	10^0
Brown	1	1	10^1
Red	2	2	10^2
Orange	3	3	10^3
Yellow	4	4	10^4
Green	5	5	10^5
Blue	6	6	–
Violet	7	7	–
Gray	8	8	–
White	9	9	–
Gold	–	–	10^{-1}

Table 15–2 Color Codes of Tubular-Shaped Chip Resistors and Tubular-Shaped Chip Capacitors

1. **Identification of the tubular-shaped chip resistor**
   If the ground color is ivory, this means a tubular-shaped chip resistor.
2. **Identification of the tubular-shaped chip capacitor**
   If the ground color is green, this means a tubular-shaped chip capacitor. It is pink for the semiconductor chip capacitor (VCTYMF · · · 562K), however.
3. **Identification of the tubular-shaped chip jumper**
   This jumper has no color band indication on it: no resistance is given for any jumper of this type.
   If the ground color is ivory, this means a tubular-shaped chip jumper.

Note:
The 1st color band is thicker than the 2nd and/or 3rd color band.
There is no indication about the resistance tolerance and the capacitance tolerance. But the tubular-shaped chip resitor is specified to have the tolerance J (±5%).

DIFFERENCES OF TUBULAR-SHAPED CHIPS AGAINST THE ORDINARY TYPES OF RESISTORS, CAPACITORS AND JUMPERS.

Tubular-shaped chip resistor

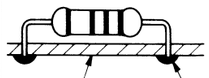
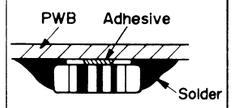
Item	Ordinary resistor	Tubular-shaped chip
Parts No.	VRD-ST2EE · · · J	VRD-MF2EE · · · J
Appearance		
Attach-ment on PWB		
Symbol on wiring diagram		

Table 15–3

Tubular-shaped chip capacitor

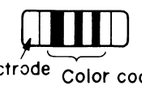
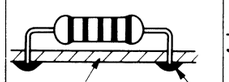
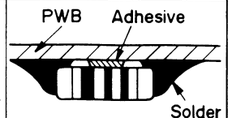
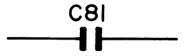
Item	Ordinary capacitor	Tubular-shaped chip
Parts No.	VCKYAT1HB · · · K	VCKYMF1HB · · · K
Appearance		
Attach-ment on PWB		
Symbol on wiring diagram		

Table 15–4

Tubular-shaped chip jumper

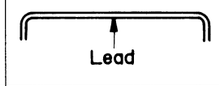
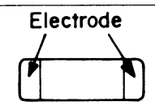
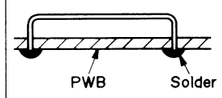
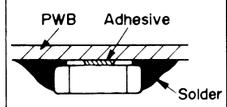
Item	Ordinary jumper	Tubular-shaped chip
Parts No.	VWRASAS– · · · ·	VRD-MF2EE000C
Appearance		
Attach-ment on PWB		
Symbol on wiring diagram	non	

Table 16–1

SERVICING OF LEADLESS TYPE RESISTORS AND CAPACITORS

Here's their servicing method different from that for the ordinary type of resistors and capacitors.

Removal of the Tubular-Shaped Chip

1. Using a soldering iron, heat the solder at each terminal of the chip to get it absorbed into a braided wire applied thereon. See Fig. 16–1.
2. Holding the chip with a pincette, take if off gently using the soldering iron's heat applied on each terminal of it. See Fig. 16–2.

Cautions on removal:

1. When handling the soldering iron, use a proper force and keep a careful manner.
2. When removing the chip, do not use undue force with the pincette.
3. The soldering iron in use should operate on AC mains; it is best if provided with a thermal control (240° or so).
4. The chip once removed must not be used again.

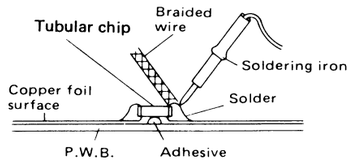


Figure 16–1

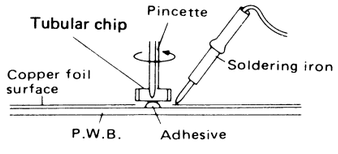


Figure 16–2

Attachment of Tubular-Shaped Chip

1. Temporarily solder one terminal of the chip on the copper foil surface. See Fig. 16–3.
2. Holding one end of the chip with a pincette, completely solter both terminals of it one after another. See Fig. 16–4.

Cautions on attachment:

1. When soldering the chip terminals, do not touch them directly with the soldering iron. The soldering must be as quick as possible being careful not to hurt the terminals and the body itself.
2. When touching the chip with a pincette, hold its terminal but never its body. See Fig. 16–4.
3. Keep the chip's body in contact with the P.W.B. when soldering.
4. The soldering iron in use should operate on AC mains; it is best if provided with a thermal control (240° or so).
5. The soldering amount must be enough but not be outside the specified area.

General Cautions on Handling and Storage

1. Oxidization on the chip's terminals results in poor soldering. Do not handle them with bare hands.
2. For storage, avoid the following places where oxidization will occur and their capacitance or resistance will be deteriorated.
   1) Sulfur or chlorine gas floating places
   2) Directly sunlit places
   3) High temperature/high humidity places

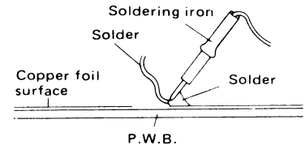


Figure 16–3

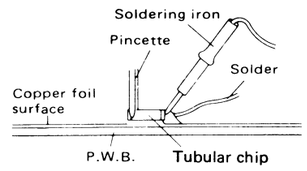


Figure 16–4

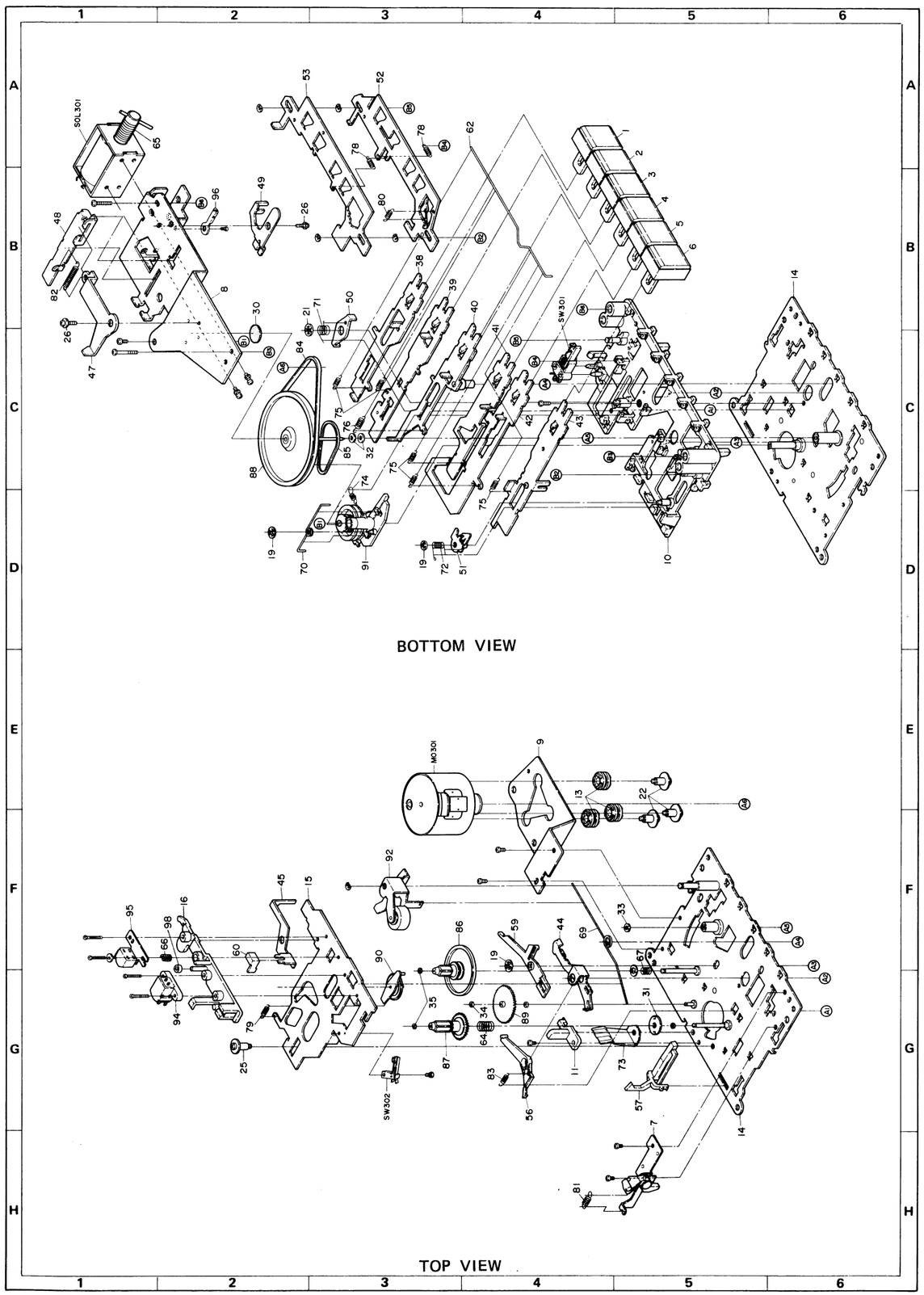


Figure 17 MECHANISM EXPLODED VIEW

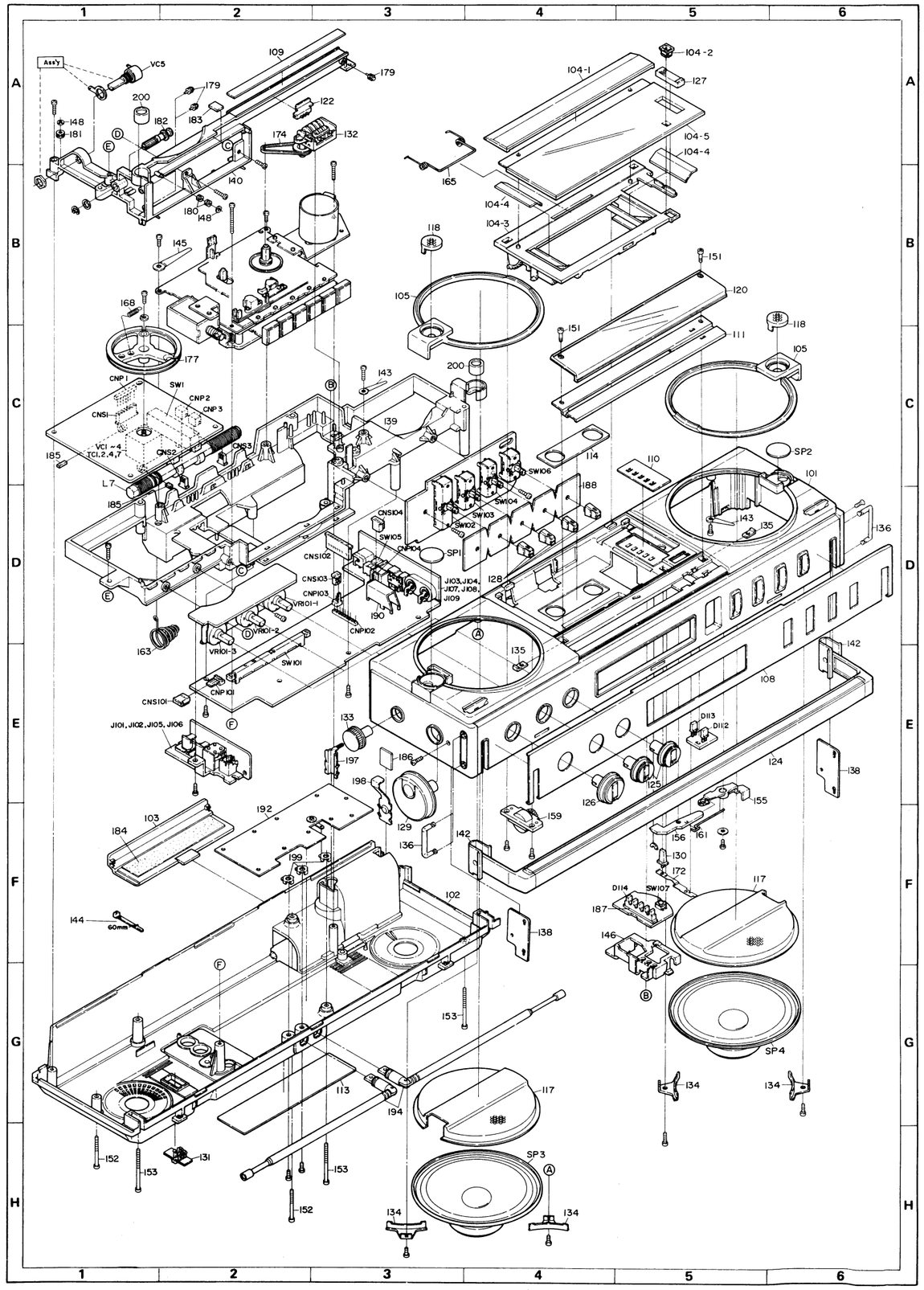


Figure 18 CABINET EXPLODED VIEW

REPLACEMENT PARTS LIST

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

NOTES: Parts marked with " ⚠ " are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

REF.NO.	PART NO.	DESCRIPTION	CODE
		INTEGRATED CIRCUITS	
IC1	VHITA7335P/-1	FM Front End(TA7335P)	AG
IC2	VHIAN7223//-1	FM IF/AM Mixer, Oscillator, IF(AN7223)	AK
IC3	VHITA7343P/-1	FM Multiplex(TA7343P)	AG
IC101	VHIM51544L/-1	Pre Amp.(M51544L)	AG
IC102	VHILA4192//-1	Power Amp.(LA4192)	AK
IC103	VHIIR3R20A/-1	APLD Circuit(IR3R20A)	AL
		TRANSISTORS	
Q102	VS2SC1815BL-1	Switching(2SC1815BL)	AB
Q103,104	VS2SD655E//-1	Muting(2SD655E)	AC
Q105	VS2SC1815GR-1	Ripple Filter(2SC1815GR)	AB
Q106	VS2SC2001-K-A	Bias Oscillator (2SC2001K)	AD
Q107	VS2SC1815GR-1	APLD Circuit(2SC1815GR)	AB
Q108	VS2SC2703-Y-A	Solenoid Drive (2SC2703Y)	AC
		DIODES	
D1	VHD1S2076//-1	Static Protector(1S2076)	AB
D3	VHD1S2076//-U	FM Overload(1S2076)	AB
D4	VHD1S2076//-U	Reverse Current Protector (1S2076)	AB
D5	VHD1S2076//-U	Reverse Current Protector (1S2076)	AB
D101,102	VHD1S1555V/1G	ALC Circuit(1S1555)	AB
D103,104	VHD1S1555V/1G	ALC Circuit(1S1555)	AB
D105	VHD1S2076//-U	ALC Circuit(1S2076)	AB
D109	VHD1S1555V/1G	Back Current Prevention (1S1555)	AB
D110	VHD10E1////-1	Surge Absorber(10E1)	AC
D111	VHD1S1555V/1G	Back Current Prevention (1S1555)	AB
D112	RH-PX1030AFZZ	LED, FM Stereo Indicator (GL-9PR2)	AC
D113	RH-PX1030AFZZ	LED, Record/Battery Indicator(GL-9PR2)	AC
D114(1~5)	RH-PX1039AFZZ	LED, APLD Indicator (LT-3009P)	AG
D115	VHERD100JB2-1	Zener, 10V/400mW (RD10JB2)	AB
D116	VHD1S2473//-U	Power Amp. Circuit (1S2473)	AB
D117	VHD1S1555V/1G	Static Protector (1S1555)	AB
		FILTERS	
CF1	RFILF0080AFZZ	Ceramic, 10.7MHz FM IF	AD
CF3	RFILA0085AFZZ	Ceramic, 455kHz AM IF	AE
		TRANSFORMERS	
T1	RCILI0157AFZZ	FM IF	AC
T2	RCILI0312AFZZ	FM Detector	AC
T3	RCILI0310AFZZ	AM IF	AC

REF.NO.	PART NO.	DESCRIPTION	CODE
		COILS	
L1	RCILA0455AFZZ	Band Pass Filter	AC
L2	RCILR0364AFZZ	FM RF	AA
L3	RCILB0463AFZZ	FM Oscillator	AA
L6	RCILA0556AFZZ	SW2 Antenna	AD
L7	RCILA0561AFZZ	Bar Antenna, AM/SW1	AL
L8	RCILB0625AFZZ	SW2 Oscillator	AC
L9	RCILB0624AFZZ	SW1 Oscillator	AC
L10	RCILB0623AFZZ	AM Oscillator	AC
L101,102	RCILF0085AFZZ	Choke, 47mH	AC
L103	RCILF0072AFZZ	Bias Oscillator	AC
L104	RCILC0082AFZZ	Choke, 47μH	AB
		CONTROLS	
VC1,2, VC3,4, TC1,2, TC4,7	RVC-R0083AFZZ	Variable Capacitor, Tuning with Trimmer TC1:FM RF Trimmer TC2:FM Oscillator Trimmer TC4:SW1 Antenna Trimmer TC7:SW1 Oscillator Trimmer	AN
VC5	RVC-Z0056AFZZ	Fine Tuning	AE
TC3	RTO-H1072AFZZ	Trimmer, SW2 Antenna Trimmer	AC
TC5	RTO-H1072AFZZ	Trimmer, AM Antenna Trimmer	AC
TC6	RTO-H1072AFZZ	SW2 Oscillator Trimmer	AC
TC8	RTO-H1072AFZZ	AM Oscillator Trimmer	AC
VR1	RVR-M0343AFZZ	VCO Adjust, 5K ohm(B)	AB
VR101(1-3)	RVR-Z0119AFZZ	VR101-1(A,B):Tone Control VR101-2:Balance Control VR101-3(A,B):Volume Control	AM
		ELECTROLYTIC CAPACITORS	
		(All electrolytic capacitors are ±20% type.)	
C12	RC-EZA336AF1C	33MFD, 16V	AB
C13	RC-EZA106AF1C	10MFD, 16V	AB
C14,26	RC-EZA476AF1A	47MFD, 10V	AB
C30	RC-EZA106AF1C	10MFD, 16V	AB
C41	RC-EZA335AF1H	3.3MFD, 50V	AB
C42	RC-EZA105AF1H	1MFD, 50V	AB
C44	RC-EZA475AF1E	4.7MFD, 25V	AB
C47	RC-EZA227AF1A	220MFD, 10V	AB
C49,50	RC-EZA105AF1H	1MFD, 50V	AB
C76	RC-EZA106AF1C	10MFD, 16V	AB
C77	RC-EZA107AF1A	100MFD, 10V	AB
C78	RC-EZA475AF1E	4.7MFD, 25V	AB
C81	RC-EZA106AF1C	10MFD, 16V	AB
C101,102	RC-EZA334AF1H	0.33MFD, 50V	AB
C105	RC-EZY476AF1A	47MFD, 10V	AB
C106	RC-EZA104AF1H	0.1MFD, 50V	AB

REF.NO.	PART NO.	DESCRIPTION	CODE
C117	RC-EZA336AF1C	33MFD, 16V	AB
C129	RC-EZA107AF1C	100MFD, 16V	AB
C137,138	RC-EZA107AF1A	100MFD, 10V	AB
C139,140	RC-EZA105AF1H	1MFD, 50V	AB
C143	RC-EZA227AF1A	220MFD, 10V	AB
C144	RC-EZA476AF1A	47MFD, 10V	AB
C145,146	RC-EZA224AF1H	0.22MFD, 50V	AB
C149	RC-EZA475AF1E	4.7MFD, 25V	AB
C150	RC-EZV475AF1E	4.7MFD, 25V	AB
C151	RC-EZA474AF1H	0.47MFD, 50V	AB
C152	RC-EZY474AF1H	1MFD, 50V	AB
C153	RC-EZA105AF1H	1MFD, 50V	AB
C154,156	RC-EZA227AF1A	220MFD, 10V	AB
C157	RC-EZY336AF1A	33MFD, 10V	AB
C158	RC-EZA475AF1E	4.7MFD, 25V	AB
C162	RC-EZV106AF1C	10MFD, 16V	AB
C165	RC-EZA336AF1C	33MFD, 16V	AB
C166	RC-EZA335AF1E	3.3MFD, 25V	AB
C167	RC-EZA104AF1H	0.1MFD, 50V	AB
C169,170	RC-EZA225AF1H	2.2MFD, 50V	AB
C179,180	RC-EZA105AF1H	1MFD, 50V	AB
C181,182	RC-EZA107AF1A	100MFD, 10V	AB
C183	RC-EZY106AF1C	10MFD, 16V	AB
C184	RC-EZV227AF1C	220MFD, 16V	AB
C187,188	RC-EZA107AF1A	100MFD, 10V	AB
C189,190	RC-AZ1001AFZZ	0.15MFD, 25V	AC
C191,192	RC-EZV108AF1A	1000MFD, 10V	AD
C193	RC-EZV108AF1C	1000MFD, 16V	AD
C194	RC-EZA107AF1C	100MFD, 16V	AB
C195,196	RC-EZA475AF1E	4.7MFD, 25V	AB
		CAPACITORS	
		(Tubular-shaped type chip capacitor is identified by the symbol MF of the part No. VC..MF....; this MF does not means the lead wire.)	
C1	VCCSMF1HL180J	18PF, 50V, ±5%, Ceramic	AA
C2,3	VCTYMF1HV472K	0.0047MFD, 50V, ±10%, Semiconductor	AA
C4	VCCCMF1HH220J	22PF(CH), 50V, ±5%, Ceramic	AA
C5	VCCCMF1HH330J	33PF(CH), 50V, ±5%, Ceramic	AA
C6	VCCRMF1HH220J	22PF(RH), 50V, ±5%, Ceramic	AA
C7	VCCCMF1HH3R9C	3.9PF(CH), 50V, ±0.25PF, Ceramic	AA
C8	VCTYMF1CY223N	0.022MFD, 16V, ±30%, Semiconductor	AA
C9	VCTYMF1EX103N	0.01MFD, 25V, ±30%, Semiconductor	AA
C11,15	VCTYMF1CY223N	0.022MFD, 16V, ±30%, Semiconductor	AA
C25,27	VCTYMF1CY223N	0.022MFD, 16V, ±30%, Semiconductor	AA
C28	VCKYMF1HB221K	220PF, 50V, ±10%, Ceramic	AA
C32	VCTYPU1EX473K	0.047MFD, 25V, ±10%, Semiconductor	AB
C43	VCQSMA1HL102J	0.001MFD, 50V, ±5%, Styrol	AB
C45,46	VCTYMF1CY223N	0.022MFD, 16V, ±30%, Semiconductor	AA
C63	VCCCMF1HH5R6D	5.6PF(CH), 50V, ±0.5PF, Ceramic	AA
C64	VCTYMF1HV472K	0.0047MFD, 50V, ±10%, Semiconductor	AA
C66	VCTYMF1HV152K	0.0015MFD, 50V, ±10%, Semiconductor	AA
C69	VCCCMF1HH100J	10PF(CH), 50V, ±5%, Ceramic	AA

REF.NO.	PART NO.	DESCRIPTION	CODE
C70	VCCSMF1HL330J	33PF, 50V, ±5%, Ceramic	AA
C71	VCKYMF1HB331J	330PF, 50V, ±5%, Ceramic	AA
C73	VCCCMF1HH5R6D	5.6PF(CH), 50V, ±0.5PF, Ceramic	AA
C74,79,80	VCTYMF1CY223N	0.022MFD, 16V, ±30%, Semiconductor	AA
C84	VCCSMF1HL470J	47PF, 50V, ±5%, Ceramic	AA
C85,87,88	VCTYMF1CY223N	0.022MFD, 16V, ±30%, Semiconductor	AA
C103,104	VCTYPA1EX223K	0.022MFD, 25V, ±10%, Semiconductor	AA
C111,112	VCKYAT1HB102K	0.001MFD, 50V, ±10%, Ceramic	AA
C113,114	VCCSPA1HL101J	100PF, 50V, ±5%, Ceramic	AA
C115,116	VCKYAT1HB391K	390PF, 50V, ±10%, Ceramic	AA
C119,120	VCTYPA1EX122K	0.0012MFD, 25V, ±10%, Semiconductor	AB
C121,122	VCKYAT1HB221K	220PF, 50V, ±10%, Ceramic	AA
C123	VCQYKA1HM122M	0.0012MFD, 50V, ±20%, Mylar	AA
C124	VCKYAT1HB681K	680PF, 50V, ±10%, Ceramic	AA
C126	VCQPKA2AA123J	0.012MFD, 100V, ±5%, Polypropylene	AB
C127	RC-QZA104AFYK	0.1MFD, 50V, ±10%, Mylar	AB
C128	VCTYPA1EX473K	0.047MFD, 25V, ±10%, Semiconductor	AA
C131,132	VCTYPA1EX152K	0.0015MFD, 25V, ±10%, Semiconductor	AA
C133,134	VCKYAT1HB471K	470PF, 50V, ±10%, Ceramic	AA
C135,136	VCTYPA1EX123K	0.012MFD, 25V, ±10%, Semiconductor	AA
C147	VCTYPA1EX103K	0.01MFD, 25V, ±10%, Semiconductor	AA
C148	VCTYPV1EX103K	0.01MFD, 25V, ±10%, Semiconductor	AA
C155	VCTYPV1EX223K	0.022MFD, 25V, ±10%, Semiconductor	AA
C159	VCKYAT1HB221K	220PF, 50V, ±10%, Ceramic	AA
C160	VCKYAT1HB561K	560PF, 50V, ±10%, Ceramic	AA
C161	VCKYAT1HB331K	330PF, 50V, ±10%, Ceramic	AA
C163	VCTYPV1EX333K	0.033MFD, 25V, ±10%, Semiconductor	AA
C164	VCCSAT1HL180J	18PF, 50V, ±5%, Ceramic	AA
C171,172	VCTYPA1EX273K	0.027MFD, 25V, ±10%, Semiconductor	AA
C173	VCTYPA1EX102K	0.001MFD, 25V, ±10%, Semiconductor	AA
C174	VCKYAT1HB102K	0.001MFD, 50V, ±10%, Ceramic	AA
C175,176	VCTYPA1EX683K	0.068MFD, 25V, ±10%, Semiconductor	AA
C177,178	VCTYPA1EX392K	0.0039MFD, 25V, ±10%, Semiconductor	AB
C185	VCTYPA1EX103K	0.01MFD, 25V, ±10%, Semiconductor	AA

REF.NO.	PART NO.	DESCRIPTION	CODE

RESISTORS

The symbol MF of the part number like VRD-MF....shows a tubular-shaped type chip resistor (1/4W, ±5%) but not a lead wire: do not take them for each other. The other resistors, unless otherwise specified, are all of carbon type (1/4W, ±5%)

R4	VRD-MF2EE154J	150K ohm	AA
R5	VRD-MF2EE562J	5.6K ohm	
R6	VRD-MF2EE681J	680 ohm	
R28	VRD-MF2EE222J	2.2K ohm	
R29	VRD-ST2EE121J	120 ohm	
R30	VRD-MF2EE471J	470 ohm	
R41	VRD-MF2EE102J	1K ohm	
R42	VRD-MF2EE103J	10K ohm	
R43	VRD-MF2EE224J	220K ohm	
R44	VRD-MF2EE471J	470 ohm	
R45,47	VRD-MF2EE332J	3.3K ohm	
R46,48	VRD-MF2EE822J	8.2K ohm	
R61	VRD-MF2EE101J	100 ohm	
R63,64	VRD-MF2EE330J	33 ohm	
R65	VRD-MF2EE470J	47 ohm	
R68	VRD-MF2EE331J	330 ohm	
R121,122	VRD-ST2EE123J	12K ohm	
R127	VRD-ST2EE150J	15 ohm	
R128	VRD-ST2EE151J	150 ohm	
R129	VRD-ST2EE121J	120 ohm	
R130	VRD-ST2EE120J	12 ohm	
R133	VRD-ST2CD823J	82K ohm, 1/6W, ±5%, Carbon	
R134	VRD-ST2EE823J	82K ohm	
R135,136	VRD-ST2EE153J	15K ohm	
R137,138	VRD-ST2EE472J	4.7K ohm	
R139,140	VRD-ST2EE103J	10K ohm	
R141	VRD-ST2CD101J	100 ohm, 1/6W, ±5%, Carbon	
R142	VRD-ST2EE101J	100 ohm	
R143,144	VRD-ST2CD184J	180K ohm, 1/6W, ±5%, Carbon	
R145,146	VRD-ST2EE563J	56K ohm	
R153	VRD-ST2EE560J	56 ohm	
R155	VRD-ST2CD151J	150 ohm, 1/6W, ±5%, Carbon	
R156	VRD-ST2EE151J	150 ohm	
R163	VRD-ST2EE822J	8.2K ohm	
R164	VRD-ST2CD122J	1.2K ohm, 1/6W, ±5%, Carbon	
R166	VRD-ST2EE470J	47 ohm	
R167	VRD-ST2CD821J	820 ohm, 1/6W, ±5%, Carbon	
R168	VRD-ST2EE102J	1K ohm	
R170	VRD-ST2EE330J	33 ohm	
R174	VRD-ST2CD153J	15K ohm, 1/6W, ±5%, Carbon	
R175	VRD-ST2CD101J	100 ohm, 1/6W, ±5%, Carbon	
R176,177, R178	VRD-ST2CD102J	1K ohm, 1/6W, ±5%, Carbon	
R179,180	VRD-ST2EE102J	1K ohm	
R181	VRD-ST2EE473J	47K ohm	
R197,198	VRD-ST2EE272J	2.7K ohm	
R201	VRD-ST2EE121J	120 ohm	
R205,206	VRD-ST2EE680J	68 ohm	
R211,212	VRD-ST2EE560J	56 ohm	
R213,214	VRD-RU2EE560J	56 ohm	

OTHER CIRCUITRY PARTS

CNP1	QCNCM0705SGZZ	Plug, 7-Pin	AC
CNP2,3	QCNCM462BAFZZ	Plug, 2-Pin	AA
CNP101	QCNCM284CAFZZ	Plug, 3-Pin	AF
CNP102	QCNCM0806SGZZ	Plug, 8-Pin	AC
CNP103	QCNCM095BAFZZ	Plug, 2-Pin	AB
CNP104	QCNCM136CAFZZ	Plug, 3-Pin	AB
CNS1	**QCNW-1476AFZZ**	7-pin Socket/7-pin Plug with Wire Leads	AG
CNS2	CCNCW334BAF04	Socket, 2-pin with Wire Leads	
CNS3	QCNW-1410AFZZ	Socket, 2-Pin with Wire Leads	AD
CNS101	QCNW-1430AFZZ	Socket, 3-pin with Wire Leads	AE
CNS102	QCNW-1431AFZZ	Socket, 8-pin with plug and Wire Leads	AH
CNS103	QCNW-1432AFZZ	Socket, 2-pin with Wire Leads	AD
CNS104	QCNW-1412AFZZ	Socket, 3-pin with Wire Leads	AE
J101,102, J105,106	QJAKZ0126AFZZ	Jack Assembly J101,102:Line Input J105,106:External Microphone	AH
J103,104, J107,108, J109	QJAKZ0133AFZZ	Jack Assembly J103,104:Line Output J107:Headphones J108:Headphones J109:External DC Power Supply	AL
MO301	RMOTV0117AF01	Motor, with Pulley	AV
SOL301	RPLU-0151AFZZ	Solenoid	AL
SP1,2	RALMB0056AFZZ	Speaker, Tweeter, Ceramic	AC
SP3,4	VSP0010PB60PA	Speaker, Woofer	AP
SW1(A~F)	QSW-S0345AFZZ	Switch, Band Selector	AG
SW101(A~L)	QSW-S0344AFZZ	Switch, Record/Playback	AG
SW102(A~F)	QSW-B0157AFZZ	Switch, Function Selector	AF
SW103(A~C)	QSW-B0156AFZZ	Switch, Tape Selector	AE
SW104(A~D)	QSW-B0156AFZZ	Switch, Mode Selector	AE
SW105	QSW-S0339AFZZ	Switch, Beat Cancel	AE
SW106(A,B)	QSW-B0158AFZZ	Switch, Record Muting	AE
SW107	QSW-K0060AFZZ	Switch, APLD	AB
SW301	QSW-F0136AFZZ	Switch, Main	AD
SW302	QSW-F0170AFZZ	Switch, APLD	AC
	QCNW-1408AFZZ	Jumper Connector, 4 Leads, Switch P.W.B. to Amp. P.W.B.	AF
	QCNW-1413AFZZ	Jumper Connector, 8 Leads, APLD Ind. P.W.B. to Amp. P.W.B.	AG
	QCNW-1439AFZZ	Jumper Connector, 2 Leads, For Ext. DC Power Supply Jack	AD
	QCNW-1440AFZZ	Jumper Connector, 4 Leads, Built-in Mic to Amp. P.W.B.	AE
	QCNW-1441AFZZ	Jumper Connector, 4 Leads, Rec./Batt. Ind. P.W.B. to Switch P.W.B.	AE
	QCNW-1442AFZZ	Jumper Connector, 4 Leads, Switch P.W.B. to Amp. P.W.B.	AE
	QCNW-1487AFZZ	Jumper Connector, 4 Leads, Control P.W.B. to Amp. P.W.B.	AD

MECHANICAL PARTS

1	JKNBR0438AFSA	Button, Stop/Eject	AD
2	JKNBR0439AFSA	Button, Record	AD
3	JKNBR0440AFSA	Button, Playback	AD
4	JKNBR0441AFSA	Button, Rewind	AD
5	JKNBR0442AFSA	Button, Fast-Forward	AD
6	JKNBR0443AFSA	Button, Pause	AD
7	LANGF0697AFZZ	Lever Assembly, Cassette Holder Lock	
8	LANGF0693AFFW	Bracket, Flywheel	AE
9	LANGF0694AFFW	Bracket, Motor	AC
10	LANGG0092AFZZ	Guide, Operation Lever	AF
11	LANGK0293AFZZ	Cassette Base	
13	LBSHZ0072AFZZ	Cushion, Motor	AB
14	LCHSM0402AFZZ	Main Chassis	
15	LCHSS0173AFFW	Sub-chassis	
16	LDAIH0059AFZZ	Head Base	AB
19	LSTWC2001AFZZ	Stop Ring, 2mm Dia.	AA
21	LSTWC3002AFZZ	Stop Ring, 3mm Dia.	AA
22	**LX-BZ0351AFFD**	Screw, Motor Retaining	AA
25	LX-HZ0100AFZZ	Screw, Sub-chassis Retaining	AA
26	LX-HZ0101AFZZ	Screw, Lever Retaining	AA
30	LX-WZ1059AFZZ	Pad, Thrust	AA
31	LX-WZ1061AFZZ	Washer, Back Tension	AA
32	LX-WZ5018AGZZ	Washer, 2.1mm Dia. ×4mm Dia.×0.5mm	AA
33	LX-WZ9053AFZZ	Washer, Oil Cut	AA
34	LX-WZ9063AFZZ	Washer, 1.2mm Dia. ×4mm Dia.×0.5mm	AA
35	LX-WZ9064AFZZ	Washer, 1.5mm Dia. ×3.8mm Dia.×0.5mm	AA
38	MLEVF1303AFFW	Lever, Stop/Eject	AF
39	MLEVF1304AFFW	Lever, Record	AB
40	MLEVF1305AFZZ	Lever, Playback	AB
41	MLEVF1306AFFW	Lever, Rewind	AB
42	MLEVF1307AFFW	Lever, Fast Forward	AB
43	MLEVF1308AFZZ	Lever, Pause	AA
44	MLEVF1309AFFW	Lever, Brake Release	AA
45	MLEVF1310AFFW	Lever, Sensor	AB
47	MLEVF1312AFFW	Lever, Record/Playback Switch	AB
48	MLEVF1313AFFW	Lever, Record/Playback Switch Interlocking	AB
49	MLEVF1314AFFW	Lever, Lock Release	AB
50	MLEVF1315AFFW	Lever, Record Prevention	AA
51	MLEVF1316AFFW	Lever, Pause Lock	AA
52	MLEVF1317AFZZ	Lever, Lock	AD
53	MLEVF1319AFFW	Lever, Lock	AC
56	MLEVP0378AFZZ	Lever, Brake	AA
57	MLEVP0379AFZZ	Lever, Erase Prevention	AA
59	MLEVP0381AFZZ	Lever, Playback Release	AA
60	MLEVP0384AFZZ	Chip, Sensor	AA
62	MRODM0080AFFW	Shaft, Spring Hanging	AA
64	MSPRC0281AFFJ	Spring, Back Tension	AA
65	MSPRC0282AFFJ	Spring, Solenoid	AA
66	MSPRC0283AFFJ	Spring, Head Azimuth Adjust	AA
67	MSPRC0293AFFJ	Spring, Back Tension	
69	MSPRD0409AFFJ	Spring, Pinch Roller	AA
70	MSPRD0410AFFJ	Spring, Fast Forward/ Rewind Roller	AA
71	MSPRD0411AFFJ	Spring, Record Prevention Lever	AA
72	MSPRD0412AFFJ	Spring, Pause Lock Lever	AA
73	MSPRP0305AFFJ	Spring, Cassette Hold Down	AA
74	MSPRT0876AFFJ	Spring, Fast Forward/ Rewind Roller	AB
75	MSPRT0853AFFJ	Spring, Operation Lever	AA
76	MSPRT0854AFFJ	Spring, Playback Lever	AA
78	MSPRT0856AFFJ	Spring, Lock Lever	AA
79	MSPRT0857AFFJ	Spring, Playback Idler	AA
80	MSPRT0858AFFJ	Spring, Auto Stop Lever	AA
81	MSPRT0859AFFJ	Spring, Cassette Holder Lock Lever	AA
82	MSPRT0860AFFJ	Spring, Record/Playback Switch Lever	AA
83	MSPRT0861AFFJ	Spring, Brake Lever	AB
84	NBLTH0085AFZZ	Belt, Flywheel Drive	AC
85	NBLTK0216AFZZ	Belt, Fast Forward/ Rewind Roller Drive	AB
86	NDAIR0158AFSA	Turntable, Take-up	AE
87	NDAIR0159AFSA	Turntable, Supply	AB
88	NFLYC0099AFZZ	Flywheel	AH
89	NGERH0082AFZZ	Gear, Fast Forward	AA
90	NIDR-0078AFZZ	Idler, Playback	AD
91	NROLW0018AFZZ	Roller, Fast Forward/ Rewind	AG
92	NROLY0045AFZZ	Pinch Roller	AD
94	RHEDA0095AFZZ	Head, Erase	AH
95	RHEDH0105AFZZ	Head, Record/Playback	AN
96	Not Available	Lug, Part of CNS102	
98	PCUSG0173AF00	Cushion	AA

MISCELLANEOUS

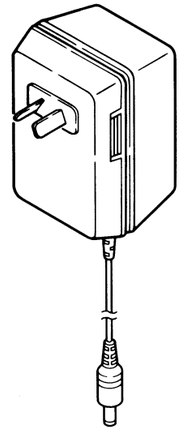
△101	GCABA1653AFSA	Cabinet, Front (GF-7A/Z)	AU
△101	GCABA1653AFSC	Cabinet, Front (GF-7AR/ZR)	AU
△102	GCABB1653AFSA	Cabinet, Rear (GF-7A/Z)	AN
△102	GCABB1653AFSB	Cabinet, Rear (GF-7AR/ZR)	AN
103	GFTAB1129AFSA	Lid, Battery Compartment	AF
104	GFTAC1203AFSA	Cassette Holder Assembly(GF-7A/Z)	AU
104-1	GCOVA1320AFSA	Ornamental Cover, Cassette Holder (GF-7A/Z)	AG
104-2	GCOVA1318AFSA	Guide, Tape Counter Reset Button	AC
104-3	GFTAC1195AFSA	Cassette Holder	AG
104-4	HDECB0179AFSA	Ornamental Metal, Cassette Holder	AD
104-5	HPNLC1368AFSA	Transparent Plate, Cassette Holder (GF-7A/Z)	AK
104	GFTAC1203AFSC	Cassette Holder Assembly(GF-7AR/ZR)	AU
104-1	GCOVA1320AFSC	Ornamental Cover, Cassette Holder (GF-7AR/ZR)	AG
104-2	GCOVA1318AFSA	Guide, Tape Counter Reset Button	AC
104-3	GFTAC1195AFSA	Cassette Holder	AG
104-4	HDECB0179AFSA	Ornamental Metal, Cassette Holder	AD
104-5	HPNLC1368AFSB	Transparent Plate, Cassette Holder(GF-7AR/ZR)	AK
105	HDECQ0164AFSA	Ornamental Ring, Speaker	AL
108	HINDM1532AFSA	Ornamental Metal, Upper	AN
109	HINDM1528AFSA	Back Plate, Dial Scale (GF-7A/Z)	AA
109	HINDM1528AFSB	Back Plate, Dial Scale (GF-7AR/ZR)	AA
110	HINDM1529AFSA	Ornamental Metal, APLD Programme Number Indicators(GF-7A/Z)	AC
110	HINDM1529AFSB	Ornamental Metal, APLD Programme Number Indicators(GF-7AR/ZR)	AC
111	HINDM1533AFSA	Dial Scale(GF-7A/Z)	AH
111	HINDM1533AFSB	Dial Scale(GF-7AR/ZR)	AH
△113	HINDP0433AFSA	Plate, Specifications(GF-7Z)	AD
△113	HINDP0443AFSA	Plate, Specifications (GF-7ZR)	AD
△113	HINDP0448AFSA	Plate, Specifications(GF-7A)	AD
△113	HINDP0449AFSA	Plate, Specifications (GF-7AR)	AD
114	HINDP0420AFSA	Mirror	AB
117	HPNC-0153AFSA	Punching Metal, Woofer (GF-7A/Z)	AK

REF.NO.	PART NO.	DESCRIPTION	CODE
117	HPNC-0153AFSB	Punching Metal, Woofer (GF-7AR/ZR)	AK
118	HPNC-0154AFSA	Punching Metal, Tweeter (GF-7A/Z)	AF
118	HPNC-0154AFSB	Punching Metal, Tweeter (GF-7AR/ZR)	AF
120	HPNLD1208AFSA	Window, Dial Scale	AF
122	HSSND0298AFSA	Pointer	AD
124	JHNDG1081AFSA	Handle (GF-7A/Z)	AT
124	JHNDG1081AFSC	Handle (GF-7AR/ZR)	AT
125	JKNBK0264AFSA	Knob, Tone/Balance Control	AE
126	JKNBK0265AFSA	Knob, Volume Control	AE
127	JKNBM0435AFSA	Button, APLD Programme Set	AD
128	JKNBM0436AFSA	Knob, Record Muting, Mode Selector, Tape Selector, Function Selector	AD
129	JKNBN0532AFSA	Knob, Tuning	AF
130	JKNBZ0253AFSA	Button, Tape Counter Reset	AC
131	JKNBP0190AFSA	Knob, Band Selector	AC
132	KCOUB0125AFZZ	Tape Counter	AK
133	JKNBN0533AFSA	Knob, Fine Tuning	AF
134	LANGK0282AFZZ	Bracket, Speaker Retaining	AA
135	LANGK0287AFFW	Bracket, Screw Retaining	AA
136	LANGZ0093AFFW	Hook, Strap	AE
138	LANGK0288AFZZ	Bracket, Strap Hook Retaining	AF
139	LHLDF1260AFZZ	Frame, P.W.Board Retaining	AH
140	LHLDF1261AFZZ	Frame, Dial Cord Stringing	AF
142	LHLDL1054AFZZ	Holder, Handle	AB
143	LHLDW3056AFZZ	Wire Holder	AA
144	LHLDW1075AFZZ	Nylon Band, 60mm	AA
145	LHLDW9003CEZZ	Wire Holder	AA
146	LHLDZ1176AFZZ	Holder, LED P.W.Board	AC
148	LSTWC2403AFZZ	Stop Ring	AA
151	LX-BZ0341AFZZ	Screw, Dial Scale Window	AA
152	LX-CZ0009AFZZ	Screw, 35mm (GF-7A/Z)	AA
152	LX-CZ0009AF00	Screw, 35mm (GF-7AR/ZR)	AA
153	LX-CZ0011AFZZ	Screw, 65mm (GF-7A/Z)	AA
153	LX-CZ0011AF00	Screw, 65mm (GF-7AR/ZR)	AA
155	MLEVP0372AFZZ	Lever, Cassette Holder Lock	AC
156	MLEVP0373AFZZ	Lever, Cassette Holder Lock	AD
159	MLIFP0017AFZZ	Damper, Cassette Holder	AD
161	MSPRB0054AFFW	Spring, Cassette Holder Lock Lever	AA
163	MSPRC0284AFFN	Spring, Battery Terminal	AA
165	MSPRD0399AFFW	Spring, Cassette Holder	AA
168	MSPRT0750AFFW	Spring, Dial Stringing	AA
172	MSPRP0315AFZZ	Spring, Tape Counter Reset Button	AA
174	NBLTK0214AFZZ	Belt, Tape Counter Drive	AB
177	NDRM-0175AFZZ	Drum, Dial Stringing	AD
179	NPLYB0051AFZZ	Pulley, Dial Stringing	AA
180	NPLYB0052AFZZ	Pulley, Dial Stringing	AA
181	NPLYB0001AFZZ	Pulley, Dial Stringing	AB
182	NSFTD0224AFZZ	Shaft, Tuning	AD
183	PCUSU0260AFZZ	Cushion, Frame	AA
184	PCUSU0251AFZZ	Cushion, Battery Compartment Lid	AA
185	PCUSU0128AFZZ	Cushion, FM RF Coil, FM Osc. Coil	AA
186	PSPAI0207AFZZ	Spacer, Battery Terminal	AA
187	PSPAZ0104AFZZ	Spacer, LED	AA
188	PFLT-0493AFZZ	Felt, Knob	AA
190	PRDAR0284AFZZ	Heat Sink	AA
192	PSLDC7064AFZZ	Shield	AC
194	QANTR0122AFZZ	Rod Antenna	AM
197	QTANB9115AFFN	Terminal, Battery	AB
198	QTANB9116AFFW	Terminal, Battery	AB
199	QTANZ0167AFFW	Terminal, Rod Antenna	AA
200	RMICC0083AFZZ	Built-in Microphone	AF
⚠	QPLGA0251AFZZ	Adaptor, AC Adaptor Plug(GF-7Z/ZR)	AE
⚠	RADPA7066AFZZ	AC Adaptor (GF-7A/AR)	BA
⚠	RADPA8064AFZZ	AC Adaptor (GF-7Z/ZR)	BB
	SPAKA0902AFZZ	Cushion, Packing	
	SPAKA0903AFZZ	Cushion, Packing	
	SPAKC1999AFZZ	Individual Carton (GF-7A)	AH
	SPAKC2000AFZZ	Individual Carton (GF-7AR)	AH
	SPAKC2044AFZZ	Individual Carton (GF-7ZR)	AH
	SPAKC1971AFZZ	Individual Carton (GF-7Z)	AH
	SPAKP0255AFZZ	Cushion Sheet, Packing	
	SSAKA0035AFZZ	Bag, Operation Manual	AA
	SSAKH0101AFZZ	Bag, Unit	AA
	TCAUA0178AFZZ	Caution Label, Arabic, AC Adaptor(GF-7Z/ZR)	AA
	TGANE1121AFZZ	Warranty Card, For PX (GF-7Z/ZR)	AC
	TGANE1124AFZZ	Warranty Card, For SCA (GF-7A/AR)	AC
	TINSE0792AFZZ	Operation Manual (GF-7A/AR)	AG
	TINSZ0387AFZZ	Operation Manual (GF-7Z/ZR)	AG
	TLABZ0118AFZZ	Label, Indication:Free of Tax (GF-7Z/ZR)	AB
	TLABZ0135AFZZ	Label, Arabic (GF-7Z/ZR)	AA
	TLABZ0181AFZZ	Label, EP, For PX (GF-7Z/ZR)	AA
	TLABZ0247AFZZ	Label, Special Feature	AC
	TLSTS0001ZZR0	Service Station List, For SCA(GF-7A/AR)	AA
	TMAPC0884AFZZ	Schematic Diagram (GF-7Z/ZR)	AC
	UBATU0010AGZZ	Battery	AC

P.W.B. ASSEMBLY
(Not Replacement Item)

DUNTL0175AF06 (Combined Assembly)	Amp. Circuit	—
DUNTR0185AF06	Radio Circuit	—

RADPA7066AFZZ



RADPA8064AFZZ

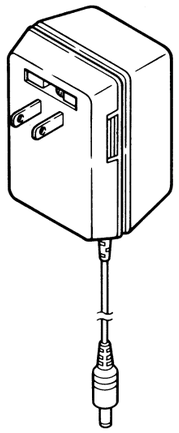


Figure 24 AC ADAPTORS

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